

## District I

1625 N. French Dr., Hobbs, NM 88240

## District II

1301 W. Grand Avenue, Artesia, NM 88210

## District III

1000 Rio Brazos Road, Aztec, NM 87410

## District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

NOTIFY OCD OF SPUD & TIME TO  
WITNESS CEMENTING OF  
SURFACE & INTERMEDIATE  
CASING

sources

Form C-101

May 27, 2004

RECEIVED

on

r.

NOV 10 2005

☐ AMENDED REPORT

OCD-ARTESIA

APPLICATION FOR PERMIT TO **DRILL**, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address Parallel Petroleum Corp. 1004 N. Big Spring Street, Suite 400, Midland, TX. 79701		OGRID Number 230387
Property Code 35234	Property Name Assault	API Number 30-005-63782
Proposed Pool 1 Wildcat, Wolfcamp GAS 97489		Proposed Pool 2

## Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	27	14S	26E		400	N	760'	W	Chaves

## Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	27	14S	26E		660'	S	760'	W	Chaves

## Additional Well Information

Work Type Code N	Well Type Code O & G	Cable/Rotary R	Lease Type Code P	Ground Level Elevation 3424'
Multiple No	Proposed Depth 9290MD, 5234TVD	Formation Wolfcamp	Contractor NA	Spud Date NA
Depth to Groundwater 65'		Distance from nearest fresh water well 2000'		Distance from nearest surface water 3000'
Pit: Liner: Synthetic X 12_mils thick Clay <input type="checkbox"/>		Pit Volume: 10,000 bbls		
Closed-Loop System <input type="checkbox"/>		Drilling Method: Fresh Water X Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>		

## Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17-1/2"	13-3/8"	48#	300'	440	Surface
12-1/4"	9-5/8"	36#	1300'	325	Surface
8-3/4"	5-1/2"	17#	TVD 5234'	NA	100' Above
			MD 9290		Glorieta

22 Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

**Well to be Drilled as a Horizontal Wolfcamp test. The attached drilling plan will be utilized for this test and contains details on the cement and mud programs as well as the directional information. The following is a summary of this plan.**

1. Prepare surface location. Move in and rig up drilling rig, spud well and drill and set conductor. Install and test BOP's.
2. Drill 17 1/2" surface hole with rotary equipment to a minimum depth of 300'. Set 13 3/8" casing and cement.
3. Drill 12 1/4" intermediate hole to a minimum depth of 1300'. Set 9 5/8" casing and cement.
4. Drill 8 3/4" production hole 5500' TD and evaluate running mud logs as well as DLL/CNL/LDT/CAL/GR to TD.
5. Set Kickoff point at 4853' and drill and advance hole to a Wolfcamp penetration point at approximately 700' S and 760' E of the NW corner of the section and continue drilling to BHL. (9290' MD & 5234' TVD)
6. Set 5 1/2" to TD and cement to a point 100' above Glorieta around 2525'. Perforate porosity and stimulate as necessary (specific procedure to be determined).
7. Place well on test.

23 I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines X, a general permit ☐, or an (attached) alternative OCD-approved plan ☐

Printed name: Deane Durham

Title: Drilling Engineer

E-mail Address: ddurham@plll.com

Date: 11-8-05

Phone: 432-684-3727

BCC OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date: NOV 16 2005

Expiration Date: NOV 16 2006

Conditions of Approval Attached

☒ Fresh Water to 1300' pg. 3

**DISTRICT II**  
P.O. Drawer DD, Artesia, NM 88211-0719

**DISTRICT III**  
1000 Rio Brazos Rd., Aztec, NM 87410

**DISTRICT IV**  
**2040 South Pacheco, Santa Fe, NM 87505**

**OIL CONSERVATION DIVISION**  
2040 South Pacheco  
Santa Fe, NM 87505

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name
97484			
Property Code		Property Name ASSAULT	Well Number 1
OGRID No.		Operator Name PARALLEL PETROLEUM CORPORATION	Elevation 3424'

### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	27	14 S	26 E		400	NORTH	760	WEST	CHAVES

## Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	27	14 S	26 E		660	SOUTH	760	WEST	CHAVES

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

**Coordinate Table**

Description	Plane Coordinate
Assault #1	X = 500,130.1
Surface Location	Y = 756,678.8
Assault #1	X = 500,130.8
Penetration Point	Y = 756,378.9
Assault #1	X = 500,139.8
Bottom Hole Location	Y = 752,415.6

**NOTE:**

1) Plane Coordinates shown hereon are Transverse Mercator Grid and Conform to the "New Mexico Coordinate System", New Mexico East Zone, North American Datum of 1927, Distances shown hereon are mean horizontal surface values.

**OPERATOR CERTIFICATION**

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

*Deane Durham*

Signature

Doody Durham

Printed Name

Drilling Eng.

Title

11-8-05

Date

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of ual surveys made by me or under my ervision and that the same is true and rect to the best of my belief.

October 12, 2005

Date Surveyed

LVA

Signature & Seal of Professional Surveyor

W.O. Num. 2005-0973

Certificate No.

**PARALLEL PETROLEUM CORPORATION**  
**ASSAULT #1**  
**SL: 760' FWL AND 400' FNL, BHL: 760' FWL AND 660' FSL**  
**SEC 27, T14S, R26E**  
**CHAVES COUNTY, NEW MEXICO**

**Objective**

Drill a vertical well through the Wolfcamp pay. Log and evaluate for a sidetrack to horizontal in the Wolfcamp.

**Expected Geologic Tops**

Est GL from topo: 3424', KB 3436'.  
Glorieta 2525'  
Tubb 3560'  
Abo Shale 4300'  
Wolfcamp 5235'  
Wolfcamp Shale 5420'

**Well Geometry**

- 13 3/8" casing at 300'
- 9 5/8" casing at 1300'
- Set kick-off plug for horizontal through the zone of interest
- 5 1/2" casing through the horizontal Wolfcamp; Cement per completion.

**Casing Program**

<u>Hole</u>	<u>MD</u> <u>(ft)</u>	<u>Casing</u>	<u>Weight</u>	<u>Grade</u>	<u>Coupling</u>	<u>COMMENT</u>
17-1/2"	0 – 300	13-3/8"	48	H40	ST&C	Must be below 300' (+KB).
12-1/4"	0 – 1300	9-5/8"	36	J55	LT&C	
8-3/4"	0 – 5500'	5-1/2"	17	N80	LT&C	Run through the horizontal lateral.

### Casing Cementing Program

13-3/8" slurry: 440 sacks Class C + 2% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 56.3% fresh water

9-5/8" slurry: Lead: 125 sacks (50:50) Poz (Fly Ash): Class C + 5% bwow Sodium Chloride + 10% bwoc Bentonite + 151.7% fresh water. Tail: 200 sacks Class C + 1% bwoc Calcium Chloride + 56.3% fresh water

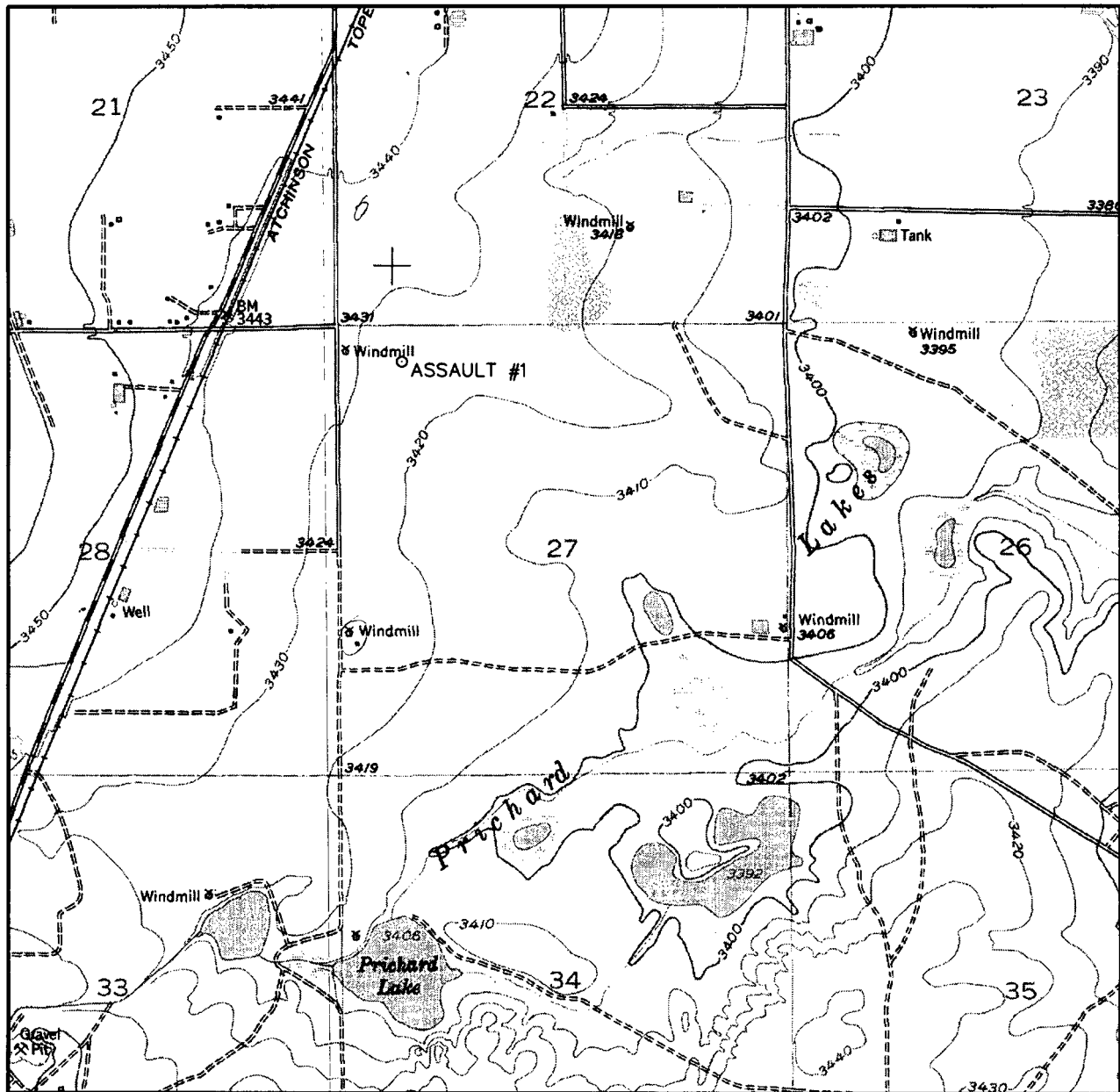
Note: If cement does not circulate to surface, notify OCD. A temperature survey will most likely be required. Top out to surface with 1" pipe in the annulus.

Note: 5-1/2" Cement per completion procedure. Top of Cement should be a minimum of 100' above Glorieta at 2525'.

### Mud Program

<u>Depth</u>	<u>Hole</u>	<u>MW</u>	<u>Visc.</u>	<u>WL</u>	<u>Synopsis</u>
0 - 300	17-1/2"	8.4	32 - 38	No control	Fresh gel Lime flocc.(outer) reserve. Fresh gel sweeps, paper & cotton seed hulls for losses.
300 - 1300	12-1/4"	8.4 - 8.6	28 - 29	No control <i>1300 Max</i>	FRESH WATER mud only to <del>1200</del> ft. Severe loss potential. Circulate inner reserve. LCM: paper, fiber, cotton seed hulls.
1300 - 4100	8-3/4"	8.6 - 9.2	28 - 29	No control	Cut brine. Start w/existing & add brine t/80K-120K chlorides
4100 - TD	8-3/4"	8.9 - 9.5	38 - 45	6 - 10	XCD/Starch polymer as req'd for hole cleaning. Lubricants.
KOP - TD Horizontal	8-3/4" & 7-7/8"	8.9 - 9.5	38 - 45	6 - 10	XCD/Starch polymer as req'd for hole cleaning. Lubricants.

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
HAGERMAN - 10'

SEC. 27 TWP. 14-S RGE. 26-E

SURVEY \_\_\_\_\_ N.M.P.M.

COUNTY \_\_\_\_\_ CHAVES

DESCRIPTION 400' FNL & 760' FWL

ELEVATION 3424'

OPERATOR PARALLEL PETROLEUM CORPORATION

LEASE ASSAULT

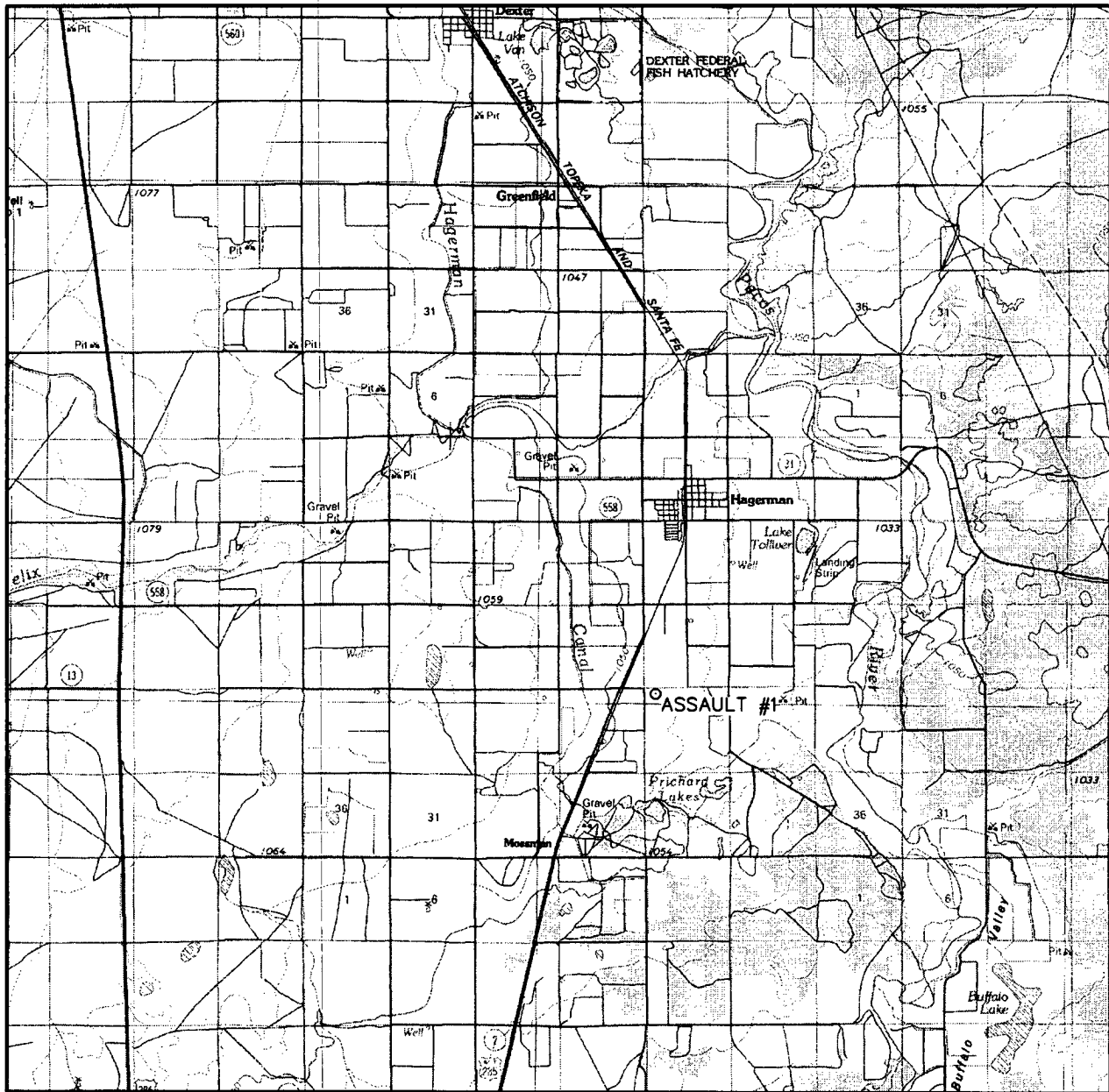
U.S.G.S. TOPOGRAPHIC MAP  
HAGERMAN, N.M.



**WEST  
COMPANY**  
of Midland, Inc.

110 W. LOUISIANA, STE. 110  
MIDLAND TEXAS, 79701  
(432) 687-0865 - (432) 687-0868 FAX

# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 27 TWP. 14-S RGE. 26-E  
 SURVEY N.M.P.M.  
 COUNTY CHAVES  
 DESCRIPTION 400' FNL & 760' FWL  
 ELEVATION 3424'  
 OPERATOR PARALLEL PETROLEUM CORPORATION  
 LEASE ASSAULT



**WEST  
COMPANY**  
 of Midland, Inc.

110 W. LOUISIANA, STE. 110  
 MIDLAND TEXAS, 79701  
 (432) 687-0865 - (432) 687-0868 FAX

# **PARALLEL** SURVEY CALCULATION PROGRAM PETROLEUM CORPORATION

OPERATOR:	Parallel Petroleum Corporation		Supervisors:	
WELL:	Assault #1			
LOCATION:	Sec. 27 T-14-S R-26-E			
API NUMBER:				
COMMENTS:				
			MAG DEC. (-/+)	
			GRID CORR. (-/+)	
			TOTAL CORR. (-/+)	0.0

DATE: 10/21/05      TIME: 1:36 PM      TRUE TO GRID ☐

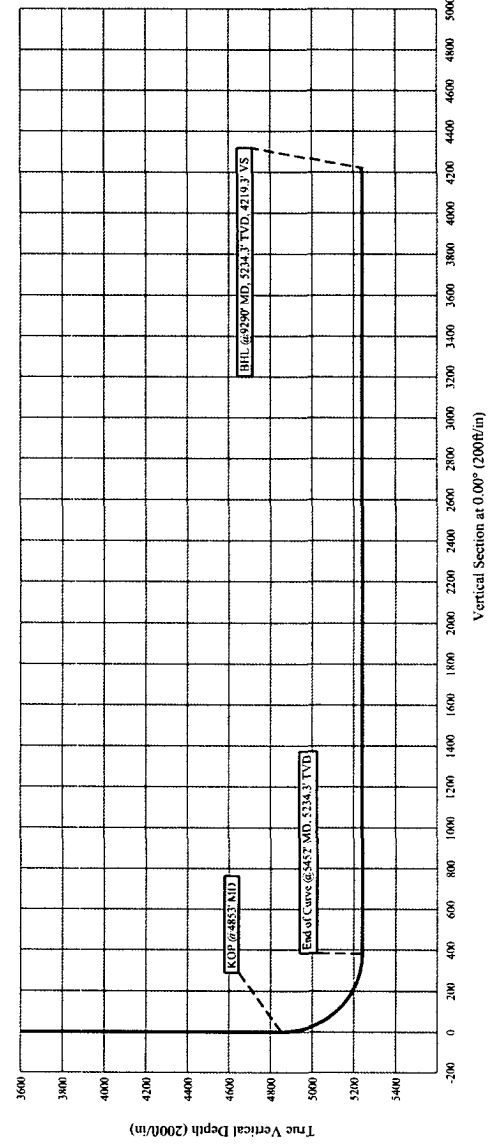
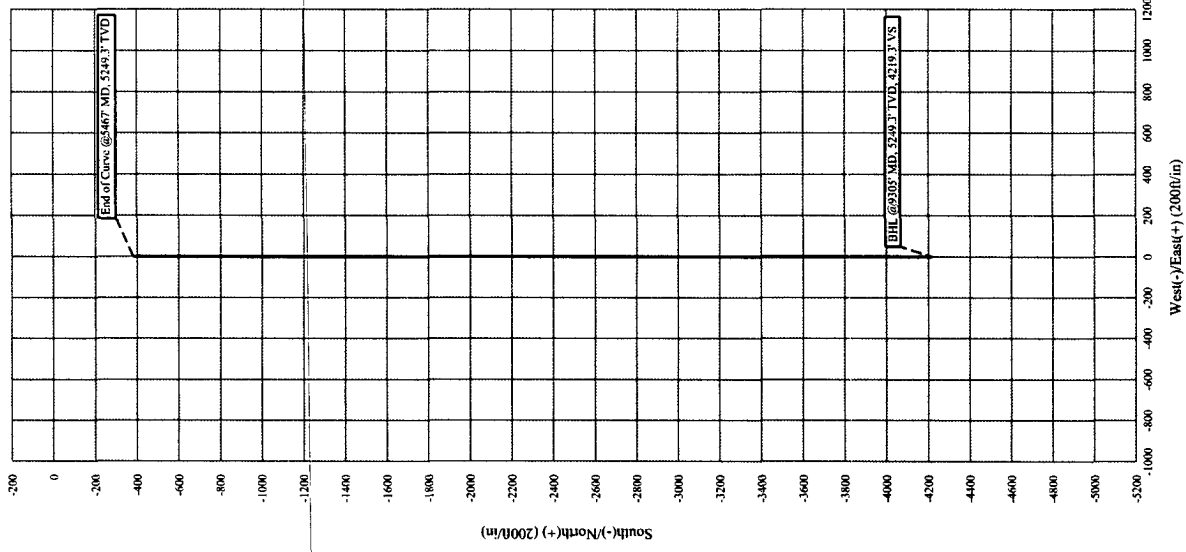
MINIMUM CURVATURE CALCULATIONS(SPE-3362)									PROPOSED DIRECTION 180.0		TARGET TRACKING TO CENTER	
SVY	MD	INC	GRID	TVD	VERT	N-S	E-W	DLS/	100		ABOVE(+)	RIGHT(+)
NUM			AZM		SECT						BELOW(-)	LEFT(-)
TIE	0	0.0	0.0	0.0	0.0	0.0	0.0					
1	4853	0.0	0.0	4853.0	0.0	0.0	0.0	0.0			382.0	0.0
2	4863	1.5	180.0	4863.0	0.1	-0.1	0.0	15.0			372.0	0.0
3	4873	3.0	180.0	4873.0	0.5	-0.5	0.0	15.0			362.0	0.0
4	5452	90.0	180.0	5234.3	381.3	-381.3	0.0	15.0			0.7	0.0
5	9290	90.0	180.0	5234.3	4219.3	-4219.3	0.0	0.0			0.7	0.0

KOP @ 4853' MD  
 BUR = 15 DEG per 100 FT  
 End Curve @ 5452' MD, 5234.3' TVD  
 BHL @ 9290' MD, 5234.3' TVD, 4219.3' VS

# Parallel Petroleum Corp.

Assault #1  
Section 27, T 14-S, R 26-E  
Chaves County, New Mexico

COMPANY DETAILS  
Parallel Petroleum Corp.  
1004 N. Big Spring, Ste 400  
Midland, Texas 79701





# PARALLEL

Petroleum Corporation

1004 North Big Spring, Suite 400 • Midland, TX 79701 • Ph: 432-684-3727 • Fax: 432-684-3905

October 21, 2005

New Mexico Oil conservation Division  
1301 W. Grand Ave.  
Artesia, New Mexico 88210

Re: Hydrogen Sulfide Potential  
Hagerman Area Wolfcamp Program  
Chavez County, New Mexico

Gentlemen:

Parallel Petroleum Corporation operates the Seabiscuit #1 well located in Section 33, T-14-S, R-26-E. The well which was tested in the Wolfcamp formation did not have any indications of hydrogen sulfide from this formation. We believe the potential for it on locations in this area are negligible.

Should you need any additional information regarding this issue, please contact me at the address or phone number listed above.

Sincerely,

Deane Durham  
Drilling Engineer